

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of the claims in this application:

Listing of the Claims:

1. (Currently amended) A biomedical implant ~~designed~~ for implantation into a spine of a patient comprising an elongated body having a first end for engaging a driving and securing device and a second ends end for initially engaging adjacent vertebrae,

wherein said elongated body being comprises a continuously tapered and threaded surface from about 5 mm to about 25 mm in length, such that

wherein the tapering said continuously tapered and threaded surface begins at a first position on or proximate to said first end and ~~continues down~~ extends throughout the length of ~~the~~ said elongated body down to a second position on or proximate to said second end,

wherein said biomedical implant is comprised of cortical, cortico-cancellous, or cancellous bone.

2. (Currently amended) The biomedical implant of claim 1, wherein said elongated body defines a substantially dowel-like shape of from about 10 to about 15 mm in length.

3. (Currently amended) The biomedical implant of claim 1, wherein said first end comprises one or more insertion holes formed into said first end such that said insertion holes are oriented along the longitudinal axis of said biomedical implant, wherein said holes are configured to engage a securing device.

4. (Currently amended) The biomedical implant of claim 1, wherein said one or more insertion holes define a circular, triangular, quadrangle, pentagonal, hexagonal, heptagonal, or octagonal shape, or a combination thereof, and said securing device comprises inserts configured to match the shape of said insertion holes.

5. (Currently amended) The biomedical implant of claim 1, wherein said first end ~~defines a~~ is wedge shape shaped for engaging a securing device.

6. (Currently amended) The biomedical implant of claim [4] 5, wherein said wedge shape comprises two or more substantially planar section that are angled obliquely in relation to the exterior surface of said elongated body.

7. (Cancelled)

8. (Original) The biomedical implant of claim 1, wherein said first end has two or more pinch cut outs formed thereon.

9. (Original) The biomedical implant of claim 1, wherein said implant comprises a channel formed through said elongated body such that said channel is positioned transverse to the longitudinal axis of said implant, said channel being adapted to have a biologically active substance disposed therein.

10. (Original) The biomedical implant of claim 1, wherein said first end defines a peg portion extending longitudinally therefrom, said peg portion configured to engage a securing device.

11. (Currently amended) A biomedical implant designed for implantation into the spine of a patient comprising two or more separate sections that are configured such that said two or more separate sections can be joined together, wherein upon said two or more separate sections being joined, an implant is formed comprising an elongated body having a first end for engaging a driving and securing device and a second ends end for initially engaging adjacent vertebrae,

wherein said elongated body being comprises a continuously tapered and threaded surface from about 5 mm to about 25 mm in length, such that

wherein the tapering said continuously tapered and threaded surface begins at a first position on or proximate to said first end and continues down extends throughout the

length of ~~the~~ said elongated body down to a second position on or proximate to said second end.

12. (Original) The biomedical implant of claim 11, wherein said implant is comprised of cortical, cortico-cancellous, or cancellous bone, or a combination thereof.

13. (Original) The biomedical implant of claim 11, wherein said two or more sections comprising joining holes formed therein such that said two or more sectioned are joined together by insertion of pins through said joining holes.

14. (Original) The biomedical implant of claim 13, wherein said pins are comprised of cortical bone.

15. (Currently amended) A method of producing a biomedical implant that comprises an elongated body having a first end and a second ends end, wherein said first end comprises two or more oblique sides,

wherein said elongated body comprises a continuously tapered and threaded surface from about 5 mm to about 25 mm in length,

wherein said continuously tapered and threaded surface begins at a first position on or proximate to said first end and extends throughout the length of said elongated body down to a second position on or proximate to said second end,

said method comprising obtaining a bone having a ridge naturally formed thereon and excising bone block section from said bone at an angle substantially perpendicular to said ridge.

16. (Original) The method of claim 15, wherein said bone is selected from a bone selected from the group consisting of femur, tibia, fibula, humerus, radius and ulna.

17. (Currently amended) The biomedical implant of claim 1, comprising a plurality of holes formed therein, optionally connecting to a central channel formed in said biomedical

implant, to aid in delivery of a biologically active substance disposed on or within the implant to surrounding tissue.

18. (Currently amended) The biomedical implant of claim 17, wherein said biologically active substance comprises one or more substances selected from the group consisting of cells, growth factors, antibiotics, nucleic acids, proteins, peptides, antineoplastics, and anti-inflammatory compounds.

19. (Currently amended) The biomedical implant of claim 1, wherein said biomedical implant is formed substantially from human, allograft cortical bone or xenograft bone.

20. (Currently amended) A ~~method of treating a defect or injury to the spine comprising obtaining a biomedical implant, said biomedical implant comprising an elongated body having a first end for engaging a driving and securing device and second end for initially engaging adjacent vertebrae ends,~~

wherein said elongated body being comprises a continuously tapered and threaded surface from about 5 mm to about 25 mm in length and further comprising two or more sections of cortical bone, cancellous bone, corticocancellous bone or a combination thereof, such that

wherein the tapering said continuously tapered and threaded surface begins at a first position on or proximate to said first end and ~~continues down~~ extends throughout the length of the said elongated body down to a second position on or proximate to said second end;

~~wherein said implant is comprised of cortical, cortico-cancellous, or cancellous bone; and~~

~~implanting said implant into a location in the spine to effect support at that location.~~

21. (Currently amended) The method biomedical implant of claim 20, ~~wherein said biomedical implant comprises~~ comprising two or more sections of cortical bone joined together with cortical bone pins.

22. (Currently amended) The ~~method~~ biomedical implant of claim 20, wherein said biomedical implant comprises a channel formed through said elongated body such that said channel is positioned transverse to the longitudinal axis of said implant, said channel being adapted to have a biologically active substance disposed therein.

23. (Currently amended) A method for fusing vertebrae ~~which comprises~~ comprising making a space between the vertebrae to be fused, and inserted into said space a biomedical implant, said biomedical implant comprising an elongated body having a first end for engaging a driving and securing device and a second end for initially engaging adjacent vertebrae,

wherein said elongated body ~~being~~ comprises a continuously tapered and threaded surface from about 5 mm to about 25 mm, such that

wherein ~~the tapering~~ said continuously tapered and threaded surface begins at a first position on or proximate to said first end and ~~continues down~~ extends throughout the length of ~~the~~ said elongated body down to a second position on or proximate to said second end,

wherein said biomedical implant is comprised of cortical, cortico-cancellous, or cancellous bone; and

wherein inserting said biomedical implant into said space between the vertebrae provides vertebrae fusion.

24. (New) The biomedical implant of claim 20, comprising two sections of cortical bone joined together with two cortical bone pins.